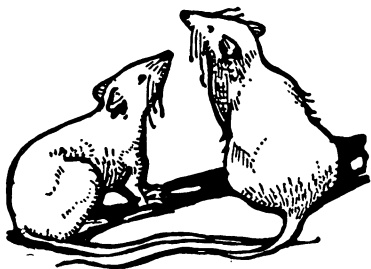


ENTOMOLOGY
NATURE RAMBLINGS
by Frank Thone



Rats and Flies

➤ SUCCESS in the anti-rat campaigns waged in hundreds of American communities this spring is likely to increase the number of carrion flies, because there will always be some dead rats in corners and crannies where even the more careful human search will not find them.

Commonest among these are the bluebottle flies, breeders in carrion and feeders on filth. For instead of laying their eggs in horse-manure for choice, as houseflies do, they deposit them on the dead and decaying carcasses of animals, which they find unerringly through their almost uncanny sense of smell. They have been used to locate dead rats and mice in houses, by releasing them in a room and then cutting through floor or wall at the spot where they cluster. If, as the never-completed old song says, there were "Forty-nine bluebottles, hanging on the wall," it's a fairly safe bet there was something dead back of that wall.

Their unsavory infancy ended, bluebottles enter upon an adulthood that is even more malodorous. For their favorite food is filth—just plain dung. You

will often see them clustered thick where some supposedly civilized city dweller has been walking a housebound dog, permitting the animal to relieve itself on public property or, worse still, on somebody else's grass-plot. Then the same insects may try to get into your dwelling, to explore your food.

What makes them most conspicuous is their bright coloring. There are three kinds: some blue, some green, some with a bronzy cast, but all with a gleaming, burnished, metallic appearance, as if they were enameled. Eyes of all three species are red. They could really be considered beautiful insects, were it not for their highly un-beautiful background and habits.

Incidentally, the entomologist who bestowed upon this glittering but filthy insect the generic name *Lucilia* merits small thanks from girls bearing that name, and its more frequent variants, *Lucelia* and *Lucille*. It is really a beautiful name, for it means "child of light"—which the bluebottle fly most decidedly is not.

Science News Letter, May 29, 1948

AERONAUTICS

Hydraulic Fluids With Water Base Safe

➤ NON-COMBUSTIBLE hydraulic fluids with a water base, for use in aircraft, were revealed by the Department of the Navy. They will not burn, and are said to be the first successful non-inflammable hydraulic fluids ever made.

The new material has been dubbed hydrolube fluids. Their use in landing gear, brake and flap control hydraulic systems will eliminate fire hazards when high-pressure hydraulic lines are ripped open by bullets or shrapnel. The material will be of value in both military and civilian airplanes by lessening danger in emergency landings when hydraulic lines are sometimes ruptured.

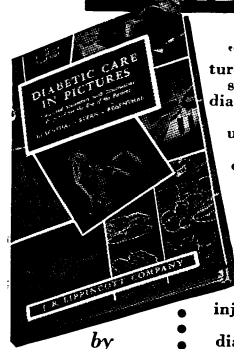
Hydrolube fluids, replacing combustible petroleum-base materials, have been thoroughly tested in Navy planes during the past two years. They are now being tested by the Civil Aeronautics Administration for commercial airplane use. They contain, in addition to the water, an anti-freeze, a thickener, corrosion inhibitors, a wear preventive and an organic chemical to make all the ingredients soluble.

Ethylene glycol is used as the anti-freeze. A special polymer is added to the water and glycol to increase the thickness. In addition to not burning, the material has a freezing point 82 degrees Fahrenheit below that of water, is much less corrosive than water, has greater freedom from packing deterioration and leakage than present hydraulic fluids, and has satisfactory lubricating qualities.

Hydrolube was developed in the Naval Research Laboratory by Dr. W. A. Zisman and assistants. In parts of the development, the laboratory had help from the DuPont Company, Wilmington, Del., and the Carbide and Carbon Chemicals Corporation of New York.

Science News Letter, May 29, 1948

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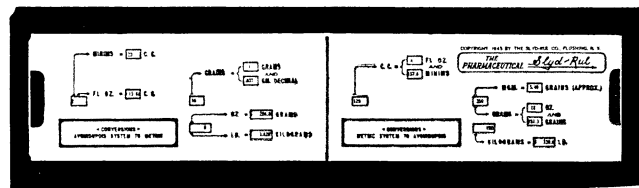
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